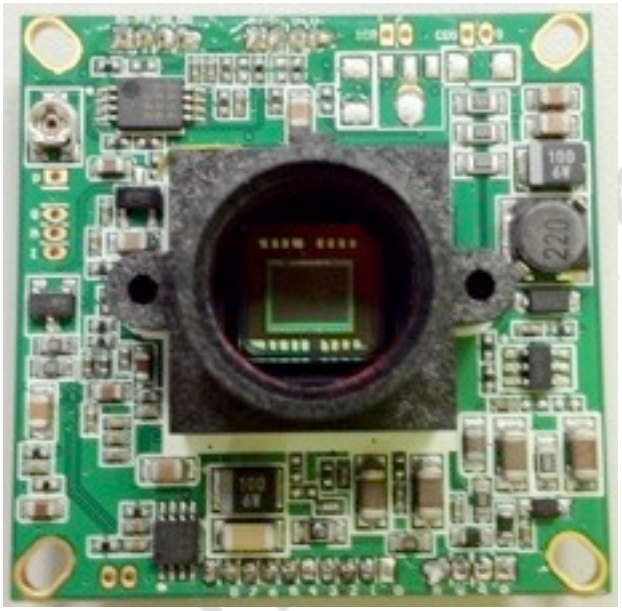
SW-24X / 25X AM0 USER MANUAL



MODEL : SW-24X / 25X AM0
PCB Ver. : V1.0
HW RD : Ray (郭柏詩)
WRITER : Usher(郭宗翰)

RELEASE	APPROVED	DESIGNER
2012/12/14		

History

Rev.	Released Date	Updated Information	Written by
1.0	2B14	User Manual Create	Usher

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1.Specification

- **SW-240 / 250 AM0**

Model	SW-240 AM0	SW-241 AM0	
CCD Sensor	NTSC	PAL	
	1/3" Color CCD ICX672	1/3" Color CCD ICX673	
OLPF	Day/Night OLPF 2 pics 850nm		
Power connector +AV out	4 pin / 1.25 mm (Compatibility lay 3 pin connector/ 1.5 mm)	3 pin / 1.5 mm (Compatibility lay 4 pin connector/ 1.25 mm)	
Effective Picture Elements	976 X 494	976 X 582	
Lens	Selectable / Default : 3.6mm, Compatibility: 6mm (F2.0) fixed lens / CS MONUT / VARI FOCAL 3.5~8 mm		
D/N(Note) (Color/Mono switch)	Auto		
Auto Gain	Yes		
Gamma	0.45		
	MIN	TYP	MAX
PCB size	37.85 * 37.85 mm	38 * 38 mm	38.15 * 38.15 mm
Horizontal Resolution		650 TV lines	
Minimum Illumination		0.1Lux	
Electronic Shutter	1/60 (1/50)	Auto	1/100,000
ATW	1800K	Auto	10500K
S/N Ratio	48dB		
Video Output		Composite 1 Vp-p 75 Ohms	
Power	DC 10.8V	DC 12V	DC 13.2V
Power Consumption	75 mA	80 mA	85 mA
Operating Temperature	-10°C		50°C
Storage Temperature	-20°C		60°C
Operating Humidity			80% RH
Storage Humidity			90% RH

Note : AGC, BLC, AE/AI, D/N, Mirror, White Balance settings are the Standard factory settings.

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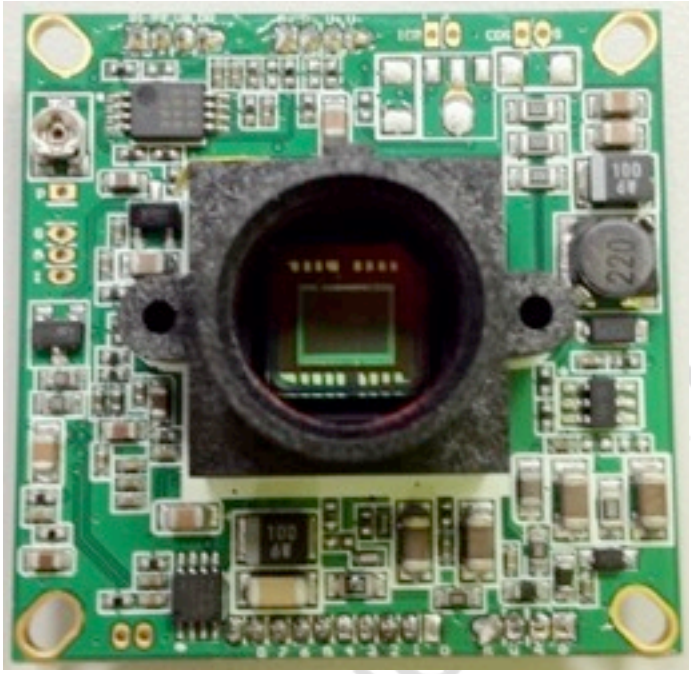
- **SW-250 / 251 AM0**

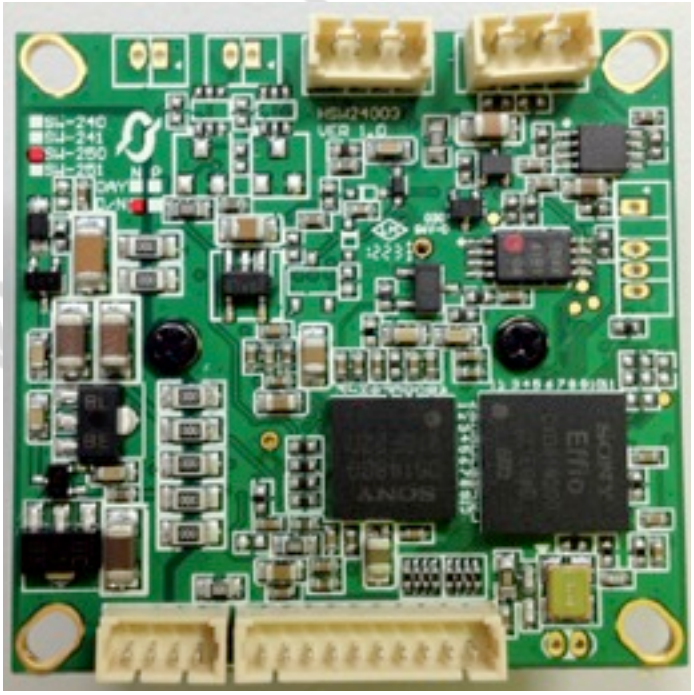
Model	SW-250 AM0	SW-251 AM0	
CCD Sensor	NTSC	PAL	
	1/3" Color CCD ICX810	1/3" Color CCD ICX811	
OLPF	Day/Night OLPF 2 pics 850nm		
Power connector +AV out	4 pin / 1.25 mm (Compatibility lay 3 pin connector/ 1.5 mm)	3 pin / 1.5 mm (Compatibility lay 4 pin connector/ 1.25 mm)	
Effective Picture Elements	976 X 494	976 X 582	
Lens	Selectable / Default : 3.6mm, Compatibility: 6mm (F2.0) fixed lens / CS MONUT / VARI FOCAL 3.5~8 mm		
D/N(Note) (Color/Mono switch)	Auto		
Auto Gain	Yes		
Gamma	0.45		
	MIN	TYP	MAX
PCB size	37.85 * 37.85 mm	38 * 38 mm	38.15 * 38.15 mm
Horizontal Resolution		650 TV lines	
Minimum Illumination		0.1Lux	
Electronic Shutter	1/60 (1/50)	Auto	1/100,000
ATW	1800K	Auto	10500K
S/N Ratio	48dB		
Video Output		Composite 1 Vp-p 75 Ohms	
Power	DC 10.8V	DC 12V	DC 13.2V
Power Consumption	75 mA	80 mA	85 mA
Operating Temperature	-10°C		50°C
Storage Temperature	-20°C		60°C
Operating Humidity			80% RH
Storage Humidity			90% RH

Note : AGC, BLC, AE/AI, D/N, Mirror, White Balance settings are the Standard factory settings.

2.PCB Top View & Mechanical Drawing



TOP



Bottom

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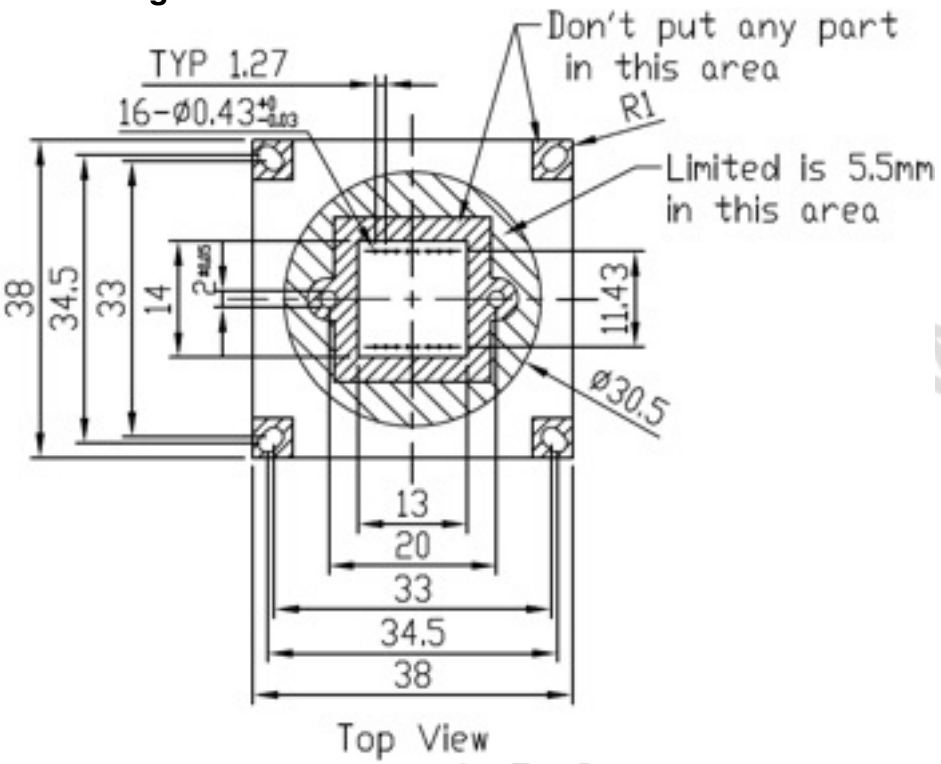
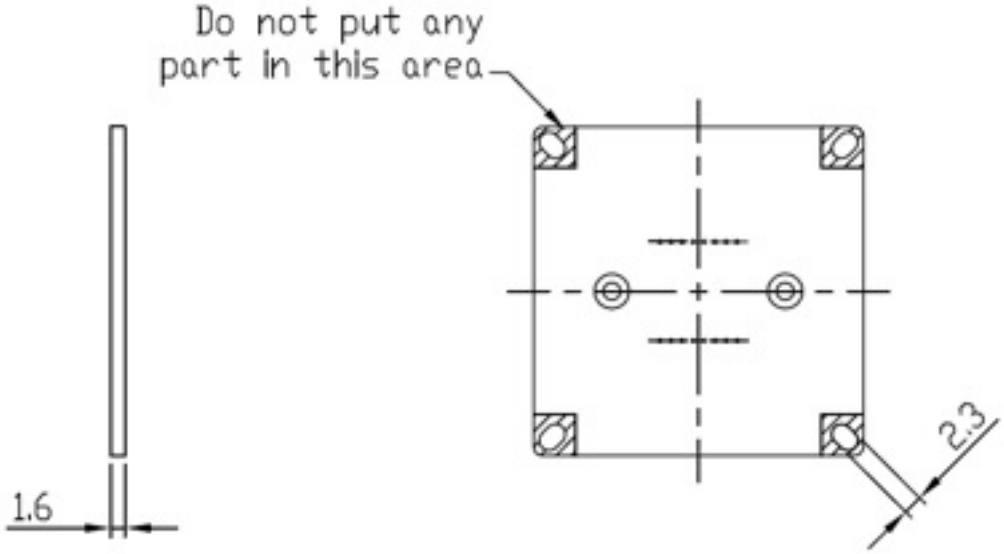
- **Mechanical drawing**



Top View



Bottom View

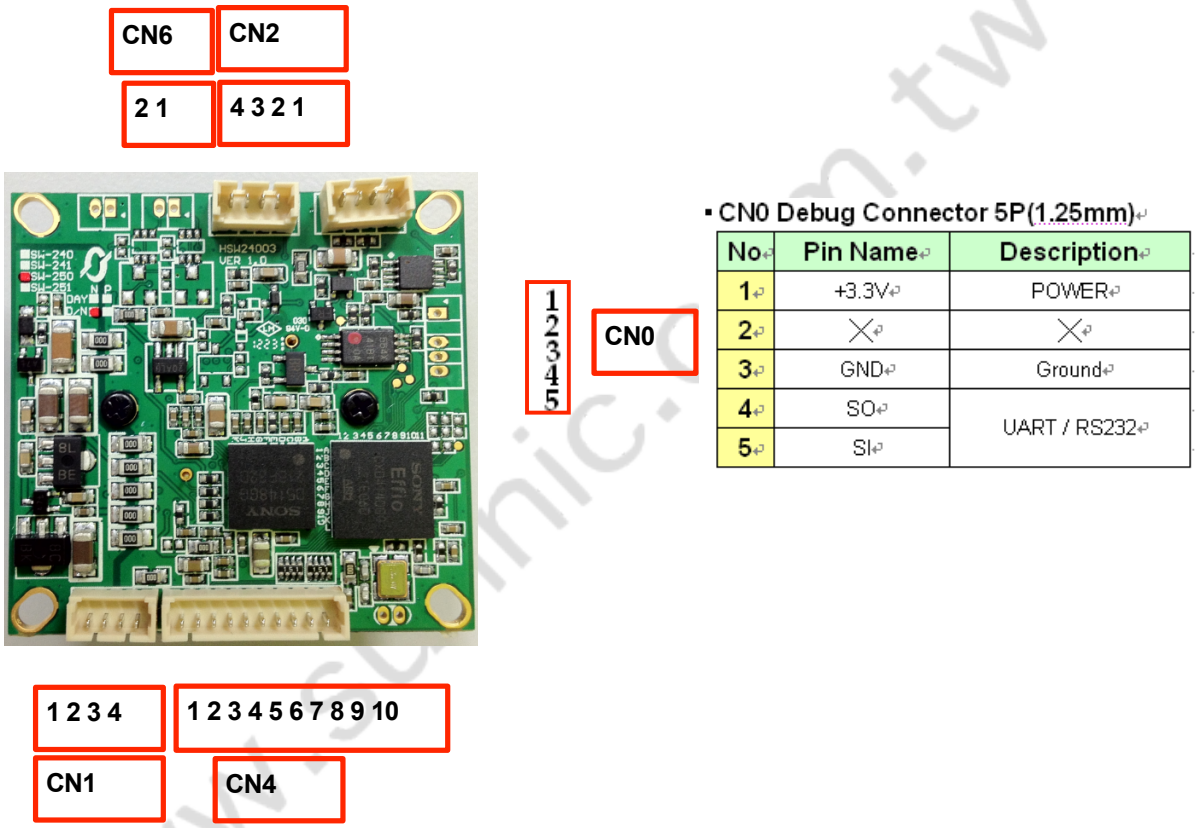
3.IO Port

CN6 : ICR Connector 2P(1.25mm)

No	Pin Name	Description
1	ICR-1	Link ICR
2	ICR-2	Link ICR

▪ CN2 AUTO IRIS Connector 4P(1.25mm)

No	Pin Name	Description
1	DMP +	1.4V~1.7V
2	DMP -	1.4V~1.7V
3	DRV +	0V ~ 5V Output
4	DRV -	Ground



▪ CN0 Debug Connector 5P(1.25mm)

No	Pin Name	Description
1	+3.3V	POWER
2	X	X
3	GND	Ground
4	SO	UART / RS232
5	SI	

▪ CN1: Power & Video Out Connector 4P (NTSC: P1.25mm)

No	Pin Name	Description
1	DC_12V	DC12V Input
2	PGND	Power Ground
3	CVBS_OUT	Video Output
4	VGND	Video Ground

▪ CN1: Power & Video Out Connector 3P (PAL: P1.50mm)

No	Pin Name	Description
1	DC_12V	DC12V Input
2	PGND	Power & Video Ground
3	CVBS_OUT	Video Output

CN4. OSD GPIOA Connector 10P(1.25mm)

No	Pin Name	Description
1	PA0_0	Link CDS
2	PA0_1	GPIO1_A
3	PA0_2	LEFT
4	PA0_3	UP
5	PA0_4	ENTER
6	PA0_5	DOWN
7	PA0_6	RIGHT
8	PA0_7	GPIO7_A
9	GND	GND
10	X	X

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4.Q&A

Q1. How to effectively make Day & Night module into Day Module ?

Use Lens with IR Coating to block the Infrared light.

Q2. How to enlarge 32x32 size PCB to 38x38 size ?

Use 32 to 38 conversion frame.

Q3. Issue on blurred image or poor image resolution

Check if the surface of the sensor or the top & bottom side of the lens are contaminated, use micro-denier to clean all the contaminants if necessary.

Also it could be image out of focus, please adjust the focus of the lens.

Q4. Can not achieve the best focus

Change the height of the lens holder if focus can not be met.

Adjust the lens to make it closer to the sensor, if you still see the blurred image, please change a lower height lens holder.

Adjust the lens to make it far away from the sensor, if you still see the blurred image, please change a higher height lens holder.

Q5. Why the color I see on the TV seem not to be correct?

For some circumstances (light source include IR), the color of the object might be influenced by the IR.

Q6. How do I deal with color rolling?

Please select modules which has auto iris function and use direct drive type auto iris lens.

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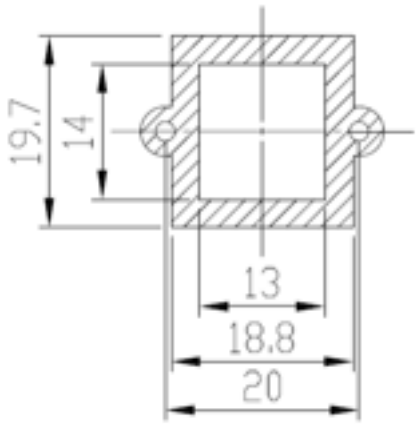
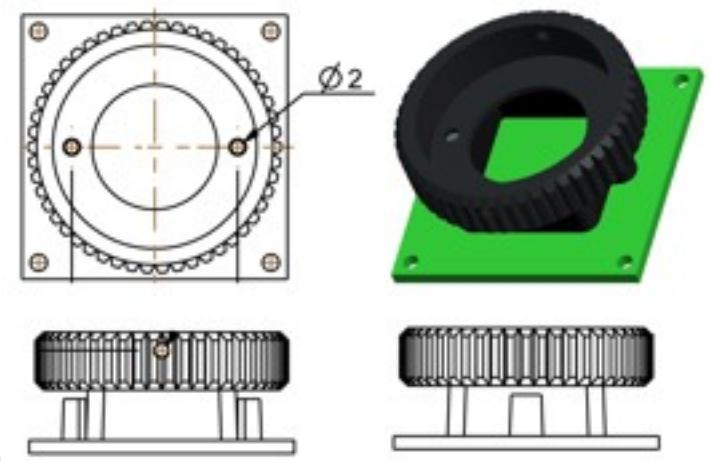
Q7. How do I select Lens Holder?

The lens holder screw hole spacing is 20mm. Please refer to the figure below for the holder size (inner & outer) (length 19.7~14mm: width 18.8~13mm)



Q8. If I want to use CS mount lens, what should I do?

Use CS mount lens holder, please refer to the follow figure.



Q9. The connection method for the power/video port?

Please refer to the "power/video port" section.

Q10. How to select IR LED?

Please use the IRLED with peak wavelength at around 850nm.

Q11. The effect of IRLED is not obvious?

(1) Your must use D/N type module (with D&N OLPF attached on the sensor)
(2 Your IRLED peak wavelength must be 850nm

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Q12. How to increase the visible distance when using IRLED at night?

(1) Increase the number of IRLED

(2) Use lens with larger iris (smaller F-number)

Q13. How to externally control the video D/N mode from color to mono when IRLED is switched ON?

Please select the module which has D/N mode input port, for detail, please contact module distributors.

Q14. Suggestions on the PCB screws

We suggest you to use M2*4 Machine Screw or (phi)2*4 self-tapping screw.

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